

## REMARKS

Claims 1-23 are pending in the application. Claims 18-23 have been withdrawn from consideration. In the Final Office Action mailed April 21, 2008, the Examiner took the following action: rejected Claims 1-17 under 35 U.S.C. §102(b) as being anticipated by Anderson (Lab Testing of Neural Networks for Improved Aircraft Onboard-Diagnostics on Flight-Ready Software, 1993). Applicants respectfully request reconsideration of the application in view of the foregoing amendments and the following remarks.

### *I. Rejections under 35 U.S.C. §102(b)*

Claims 1-17 are rejected under 35 U.S.C. §102(b) as being anticipated by Anderson. Claims 2-17 depend from Claim 1. Claim 1 recites:

1. A method of operating a product, comprising:  
monitoring a first diagnostic information of a mechanical component included in a flight control system of the product;  
monitoring a second diagnostic information of the flight control system of the product, wherein the second diagnostic information is independent of the first diagnostic information;  
combining the first diagnostic information of the mechanical component and the second diagnostic information of the flight control system; and  
automatically reconfiguring at least one of the mechanical component and the flight control system to compensate if the combined first and second diagnostic information indicates a degradation of the mechanical component.

Applicants respectfully traverse the rejection. First, Anderson does not recite as claimed in Claim 1, “monitoring a first diagnostic information of *a mechanical component* included in a flight control system of the product.” (Emphasis added).

Instead, Anderson discloses that “if a high acceleration load factor is present when Relay #1 triggers, a casual relationship is established in the output signal that may be valuable in the diagnosis of the system functions.” (Page 406, Left Column, Lines 8-11; Figure 3). However,

the disclosure of Anderson does not teach or suggest that either the “high acceleration load factor” or the triggering of “Relay #1” includes diagnostic information from a *mechanical component* included in a flight control system, as claimed in Claim 1.

It is well established that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP § 2131.

In this instance, there is nothing in Anderson that specifically discloses that “Relay #1” conveys information from either a “mechanical component” or a “flight control system” that includes the “mechanical component.” Additionally, Anderson also does not specifically disclose that “Relay #2”, as shown in Figure 3 of Anderson, conveys information from either a “mechanical component” or a “flight control system” that includes the “mechanical component.” Likewise, there is nothing in Anderson that specifically discloses that the “high acceleration load factor” is from a “mechanical component” or a “flight control system” that includes the “mechanical component”. Indeed, Anderson discloses that “neural network”, which includes the “load acceleration factor” and the “Relay #1”, is used to diagnose computer failures. (Page 406, Left Column, Lines 16-18; Figure 4). Thus, this element of Claim 1 is not anticipated by Anderson.

Second, Anderson does not recite as claimed in Claim 1, “monitoring a second diagnostic information of *the flight control system* of the product, wherein the second diagnostic information is independent of the first diagnostic information.” (Emphasis added).

Instead, Anderson discloses that “if a high acceleration load factor is present when Relay #1 triggers, a casual relationship is established in the output signal that may be valuable in the diagnosis of the system functions.” (Page 406, Left Column, Lines 8-11; Figure 3). However, the disclosure of Anderson does not teach or suggest that either the “high acceleration load

factor" or the triggering of "Relay #1" includes diagnostic information from a *flight control system*, as claimed in Claim 1.

Once again, there is nothing in Anderson that specifically discloses that "Relay #1" conveys information from a "flight control system" that includes a "mechanical component." Additionally, Anderson also does not specifically disclose that "Relay #2", as shown in Figure 3 of Anderson, conveys information from a "flight control system" that includes a "mechanical component." Likewise, there is nothing in Anderson that specifically discloses that the "high acceleration load factor" is from a "flight control system" that includes a "mechanical component". Thus, this element of Claim 1 is also not anticipated by Anderson.

Third, since Anderson does not disclose the above mentioned elements of Claim 1, Anderson also cannot recite, "combining the first diagnostic information of the *mechanical component* and the second diagnostic information of the *flight control system*," as claimed in Claim 1.

Accordingly, Applicants respectfully submit that the cited reference to Anderson does not recite the method claimed in Claim 1. Thus, Claim 1 is allowable over Anderson. Furthermore, because Claims 2-17 depend from Claim 1, they are also allowable for at least the same reason that Claim 1 is allowable. Further, the additional elements in dependent Claims 2-17 provide limitations that are not taught by Anderson. Although all dependent claims recite limitations not taught by Anderson, only Claim 9 is further discussed below.

Specifically, Anderson does not recite, "reconfiguring *both the mechanical component and the flight control system* to compensate during a flight if the combined first and second diagnostic information indicates a degradation of the mechanical component," as claimed in Claim 9. (Emphasis added).

Instead, Anderson discloses that when its damage detection network identifies that a control surface is damaged, the network uses the information to "reconfiguring the *remaining* flight control surfaces to restore safe flight." Since Anderson discloses the reconfiguration of

"remaining flight control surfaces," Anderson cannot disclose reconfiguring a degraded or damaged control surface.


Accordingly, Anderson does not recite, "reconfiguring *both the mechanical component and the flight control system* to compensate during a flight if the combined first and second diagnostic information indicates a *degradation of the mechanical component*," as claimed in Claim 9. (Emphasis added). Thus, Claim 9 is further allowable.

### CONCLUSION

Applicants respectfully request that the above-proposed amendments be entered and that pending claims 1-17 be allowed. If there are any remaining matters that may be handled by telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

Respectfully Submitted,

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